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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,146	09/12/2003	Jean-Laurent Pradel	FR-AM 1882	8740

31684 7590 03/28/2005

ARKEMA INC.
PATENT DEPARTMENT - 26TH FLOOR
2000 MARKET STREET
PHILADELPHIA, PA 19103-3222

EXAMINER

JACKSON, MONIQUE R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 03/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,146

Applicant(s)

PRADEL ET AL.

Examiner

Monique R Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites the limitation “10 to 35 weight% of a polymer (A) comprising...a metallocene polyethylene (A1)...and...a non-metallocene linear low density polyethylene (LLDPE) (A2)...20 to 35 weight % of PE (C)”. First it is noted that the abbreviation “PE” should be preceded by the full term, i.e. polyethylene, upon the first occurrence of the abbreviation in the claims. Further, considering the claimed composition and the instant specification provide no clear differentiation between the PE (C) and the polyethylene polymers recited in (A), wherein PE (C) can also meet the limitations of either (A1) or (A2), the claim is considered indefinite. A claim in which one ingredient is defined so broadly that it reads upon a second does not meet the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Ferm and Boynton*, 162 USPQ (BdPatApp & Int 1969.) It is also noted that Claim 1 recites the limitation “the total making 100%” however it is unclear whether this term refers to the total tie composition or the total of (A), (B) and (C), considering the claim is drafted in open transition language. The claim further recites “such that the MFI or melt flow index...is comprised between 0.1 and 10 g/10 min” wherein the term “is comprised” as recited in this limitation allows the MFI range of the composition to extend beyond the range recited as long as the range comprises the 0.1 to 10g/10 min. Hence, there are no boundaries with respect to the MFI range

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recited. The Examiner also notes that the density values recited in Claims 1, 2, and 5 should include the units, i.e. g/cm^3 . Further, the Examiner notes that Claim 1 recites the term “A coextrusion tie” in line 1, however, it is noted that the claim is actually directed to a tie composition considering claim 1 does not provide any other element(s) or layer(s) to which the “coextrusion tie” is bonded and hence the claimed invention cannot really be a “tie” by itself. Lastly, the Examiner suggests that the term “characterized in that” as recited in instant claims 2-6 and 8 be amended to conform to accepted U.S. terminology to better clarify the invention being claimed. Hence, given all of the above, one having ordinary skill in the art would not be reasonably apprised of the scope of the claimed invention and could not interpret the metes and bounds of the claim so as to understand how to avoid infringement.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robert et al (USPN 6,528,587.) Robert et al teach a coextrusion binder composition comprising 5 to 35 parts of a polymer blend (A) which consists of a blend of 80 to 20 parts of a metallocene polyethylene (A1) with a relative density of between 0.865 and 0.915 and of 20 to 80 parts of a non-metallocene LLDPE polyethylene (A2) with a relative density of 0.900 and 0.950, the blend of (A1) and (A2) being cografted by an unsaturated carboxylic acid or derivatives such as maleic anhydride; and 95 to 5 parts of (B) selected from the group consisting of at least one of ethylene

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homopolymer, ethylene copolymer such as LLDPE and metallocene polyethylene, and a hydrocarbon elastomeric copolymer such as SBS block copolymers; wherein the content of grafted unsaturated carboxylic acid or derivative is between 30 and 100,000 ppm with respect to the blend; and wherein the MFI is between 0.1 and 10 g/10 min (Abstract; Col. 3, lines 7-9; Col. 4, lines 33-51; Claims.) Robert et al further teach that the coextrusion tie composition may be utilized as a tie layer in a structure comprising a polyolefin layer (F), a layer of the tie composition, and either a layer (E) of a nitrogen-containing or oxygen containing polar resin layer such as polyamides, aliphatic polyketones, saponified copolymers of ethylene and vinyl acetate, polyesters, or a metal layer (Col. 5, lines 1-33.) Hence, Robert et al teach all of the components of the general tie composition instantly claimed in weight parts that read upon the instantly claimed weight percentages. With respect to Claim 1, Robert et al do not teach the styrene content of the SBS block copolymer as instantly claimed, however, considering it is well established in the art that the amount of styrene content in a SBS block copolymer is a result-effective variable in terms of the soft/hard block content, it would have been obvious to one having ordinary skill in the art to utilize routine experimentation to determine the optimum amount of styrene to include wherein SBS copolymers comprising a styrene content as instantly claimed are common and conventionally utilized in the coextrusion art. With respect to Claim 7, Robert et al teach that the tie composition can be utilized in a multilayer structure comprising a polyolefin layer(F)/tie/layer(E) as defined above but do not specifically teach that the polyolefin layer (F) is a polystyrene layer, however polystyrene is an obvious species of polyolefin and would have been obvious to one having ordinary skill in the art at the time of the invention wherein one skilled in the art at the time of the invention would have been motivated to

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determine the optimum amount of each component of the tie composition taught by Robert et al based on the selected layers (F) and (E).

5. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beuzelin et al (USPN 6,657,006) in view of Robert et al. Beuzelin et al teach a coextrusion binder or tie composition suitable for use in multilayer structures comprising a three-layer structure of polystyrene (PS), the tie composition, and a layer of polyolefins, polyamides, polyesters or ethylene-vinyl alcohol copolymers (Abstract; Col. 5, line 57-Col. 6, line 38.) Beuzelin et al teach that the tie composition may comprise SBS block copolymers having a styrene content that reads upon the instantly claimed range, blended with a polymer (c) that is graft modified with a carboxylic acid such as maleic anhydride in an amount of 50 to 20,000 ppm relative to the polymer, wherein polymer (c) may be ethylene homopolymers or copolymers having a density of 0.88 to 0.970 such as LLDPE and VLDPE (Abstract; Col. 2-4.) Beuzelin et al do not teach the weight percentages as instantly claimed or that the polymer (c) comprises a blend of LLDPE and metallocene polyethylene as instantly claimed however Robert et al teach that a tie composition comprising a blend as instantly claimed of modified LLDPE and modified metallocene PE provides a tie composition with improved properties wherein the tie composition is able to withstand heat treatments and various types of thermal stress (Col. 1) and hence one having ordinary skill in the art at the time of the invention would have been motivated to utilize a blend as taught by Robert et al in the tie composition taught by Beuzelin et al and further to determine the optimum amount of each component to include in tie composition based on the desired end use and adjacent layers to be adhered.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R Jackson whose telephone number is 571-272-1508.

The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Monique R. Jackson
Primary Examiner
Technology Center 1700
March 20, 2005